

An Annotated List of Moths Recorded at Florissant Fossil Beds National Monument, Colorado.

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Abstract. The author lists, with dates of capture, 201 species of moths collected or seen and positively identified at Florissant Fossil Beds National Monument, Colorado, from 1976 to 1988.

During the summers of 1976 and 1977, Dr. F. Martin Brown collected moths by UV light at the Florissant Fossil Beds National Monument in Teller County, Colorado. Some specimens (indicated in the text) were also collected by National Park Service personnel Ellen W. Elder, R. Hodgson, and John R. Lancoa. Moth specimens were spread, labelled, and sent to the American Museum of Natural History, New York City, for identification. Most of these specimens are now in the collection at the Florissant Fossil Beds National Monument. A small portion of them — particularly the microlepidoptera — are in the collection of the University of Louisville, Kentucky.

On June 18, 1988, the author, with Patrick Lawler and Troy Payne assisting, collected at blacklight near the Monument headquarters. All of the 1988 records included here resulted from that collection, which is incorporated into that of the University of Louisville, Kentucky.

The Florissant Fossil Beds National Monument occupies slightly more than nine square miles - more than 5,500 acres - in Teller County. For the most part it was grazing land with a few hundred acres devoted to tourist attractions of fossil stumps and pits in which to dig - for a fee. Structurally the park occupies a valley following branches of Grape Creek, flanked with low granite hills covered by an open stand of ponderosa pines. In a few of the northward facing valleys are small clusters of firs and spruces. The greater area of the park is grassland, some of it marshy, the rest dry.

The names of the species collected are numbered and constructed in accordance with Hodges et al. (1983) although *Grammia geneura* (no. 8180) follows a more recent combination (Ferguson, 1984). Dates of collection follow the names. Most of the moths are medium and larger species - particularly Pyralidae, Geometridae, and Noctuidae - and were determined by F.H. Rindge, E.L. Quinter, and the late A.B. Klots of the American Museum of Natural History, New York City, to whom I am grateful for their help. Identifications of the 1988 material were done by D.C. Ferguson, R.W. Hodges, and R.W. Poole, all of the U.S. National Museum of Natural History, and J.A. Powell, University of California, Berkeley. To them I am very grateful. Special thanks are due to F.

Martin Brown and Grace Kemper for providing valuable information for this manuscript.

While the 201 species listed here represent only a small portion of the total Lepidoptera fauna of the Monument, and a few specimens are still undetermined, I hope these data will provide a useful baseline of information upon which a more complete survey can later be undertaken.

OECOPHORIDAE

- 980 *Ethmia discostrigella* (Chambers). 6-18-88
1011 *Antaeotricha schlaegeri* (Zeller). 6-18-88

GELECHIIDAE

- 1968+ *Gnorimoschema* sp. 6-18-88

MOMPHIDAE

- 1423+ *Mompha* sp. 6-18-88

TORTRICIDAE

- 3014 *Eucosma ridingsana* (Robinson). 8-20-76
3015 *E. fernaldana* (Grote). 8-20-76
3030 *E. ragonoti* (Walsingham). 7-30-76
3070 *E. Franclemonti* Powell. 6-18-88
3502 *Croesia albicomana* (Clemens). 6-18-88
3608 *Argyrotaenia coloradana* (Fernald). 7-30-76
3609 *A. provana* (Kearfott). 6-18-88
3618 *A. dorsalana* (Dyar). 6-18-88
3638 *Choristoneura fumiferana* (Clemens). 7-30-76. Spruce Budworm adults were also observed by the author near the Park headquarters on ponderosa pines, 7-16-84 and 7-23-84.
3644a *C. lambertiana* (Busck), ssp. *ponderosana* Obraztsov. 7-27-76; 7-30-76. A series of 7 highly variable specimens.
3647 *Cudonigera houstonana* (Grote). 6-18-88

COCHYLIDAE

- 3794 *Hysterosia aureoalbida* Walsingham. 6-18-88

PYRALIDAE

- 4781 *Petrophila avernalis* (Grote). 6-18-88
4919 *Prorasea fernaldi* Munroe. 6-21-76; 7-30-76
5017 *Loxostege cerealalis* (Zeller). 6-21-76; 7-13-77; 6-18-88
5034 *Pyrausta signatalis* (Walker). 6-18-88
5060 *P. subsequalis* (Guenée), ssp. *plagalis* Haimbach. 7-30-76; 8-20-76

- 5347 *Crambus awemellus* McDunnough. 8-20-76
 5352 *C. richusalis* (Hulst). 9-9-76
 5388 *C. dimidiatellus* Grote. 7-14-76; 7-30-76; 8-20-76
 5403 *Agriphila vulgivagella* (Clemens). 7-30-76; 8-20-76

PTEROPHORIDAE

- 6109 *Platyptilia carduidactyla* (Riley). Questionably this species. 8-20-76

GEOMETRIDAE

- 6290 *Itame loricaria* (Eversmann). 7-14-76
 6304 *I. bitactata* (Walker). 7-30-76
 6339 *Semiothisa transitaria* (Walker) (subspecies or undescribed sibling species). 6-18-88
 6346 *S. unipunctaria* (W.S. Wright). 6-21-76
 6373 *S. delectata* Hulst. 6-18-88
 6381 *S. colorata* Grote. 6-18-88
 6383 *S. pervolata* (Hulst). 6-18-88
 6393 *S. yavapai* (Grossbeck). 6-18-88
 6396 *S. neptaria* (Guenée). 6-21-76
 6415 *S. cyda* (Druce). 6-18-88
 6448 *Glena nigricaria* (Barnes & McDunnough). 6-21-76
 6463e *Stenoporpia pulmonaria* (Grote), ssp. *vicaria* Rindge. 8-23-77
 6470 *S. macdunnoughi* Sperry. 6-21-76; 7-14-76; 6-18-88
 6474 *S. excelsaria* (Strecker). 6-21-76
 6631 *Galenaria lixarioides* McDunnough. 6-21-76; 6-18-88
 6635 *Vinemina opacaria* (Hulst). 6-18-88
 6640a *Biston betularia* (Linnaeus), ssp. *cognataria* (Guenée). 6-18-88
 6684 *Drepanulatrix bifilata* (Hulst). 7-13-77
 6737 *Euchlaena tigrinaria* (Guenée). 6-18-88
 6761 *Pero occidentalis* (Hulst). 6-18-88
 6819 *Metanema inatomaria* Guenée. 6-18-88
 6852 *Epiplatymetra coloradaria* (Grote & Robinson). 7-30-76
 6857 *Lychnosea helveolaria* (Hulst). 7-30-76
 6860 *Neoterpes trianguliferata* (Packard). 6-21-76
 6865 *Caripeta aequaliaria* Grote. 6-18-88
 6865.1 *Caripeta suffusata* Guedet. 7-30-76
 6866 *C. interalbicans* Warren. 6-21-76
 6875 *Snowia montanaria* Neumoegen. 6-18-88
 6876 *Nemeris speciosa* (Hulst). 7-14-76
 6879.1 *Meris alticola* Hulst. 7-30-76
 6883 *Destutia excelsa* (Strecker). 6-18-88
 6895 *Lambdina vitraria* (Grote). 6-18-88
 6905 *Nepytia swetti* Barnes & Benjamin. 7-30-76
 6964 *Tetracis cachexiata* Guenée. 6-18-88
 7000 *Sabulodes niveostriata* (Cockerell). 7-30-76

- 7006 *Enypia griseata* Grossbeck. 7-13-77
 7065 *Cheteoscelis bistraria* (Packard). 7-13-77; 7-14-76
 7096 *Lobocleta quaesitata* (Hulst). 7-14-76
 7140 *Cyclophora nanaria* (Walker). 7-16-76
 7170 *Scopula luteolata* (Hulst). 7-30-76
 7191 *Dysstroma formosa* (Hulst). 7-13-77
 7199 *Eulithis propulsata* (Walker). 8-20-76
 7216 *Plemyria georgii* Hulst. 9-24-76
 7220 *Thera latens* Barnes & McDunnough. 8-20-76
 7236 *Hydriomena renunciata* (Walker). 6-18-88
 7243 *H. albimontanata* McDunnough. 7-13-77
 7264 *H. morosata* Barnes & McDunnough. 7-13-77
 7275 *H. similaris* Hulst. 6-30-76; 7-30-76
 7301 *Entephria multivagata* (Hulst). 8-20-76
 7328 *Perizoma custodiata* (Guenée), form "*polygrammata*" (Hulst). 6-21-77
 7347 *Stamnodes formosata* (Strecker). 7-14-76; 7-30-76; 6-18-88
 7385 *Xanthorhoe alticolata* Barnes & McDunnough. 8-20-76
 7386 *X. defensaria* (Guenée). 6-18-88
 7391 *X. dentilinea* Barnes & McDunnough. 7-30-76; 8-20-76
 7405 *Loxofidonia acidaliata* (Packard). 8-20-76
 7445 *Horisme intestinata* (Guenée). 7-13-77
 7513 *Eupithecia nabokovi* McDunnough. 7-30-76
 7529 *E. coagulata* Guenée. 7-30-76
 7539 *E. multistrigata* (Hulst). 7-13-77
 7540 *E. perfusca* (Hulst). 6-21-76
 7594 *E. anticaria* Walker. 6-21-77; 6-18-88
 7641 *Lobophora montanata* Packard. 6-18-88

LASIOCAMPIDAE

- 7687 *Phyllodesma americana* (Harris). 6-18-88
 7702 *Malacosoma californicum* (Packard). 7-30-76

SATURNIIDAE

- 7726 *Coloradia lushi* Barnes & Benjamin. 6-21-77; 6-18-88

SPHINGIDAE

- 7822 *Smerinthus cerisyi* Kirby. 6-18-88
 7828 *Pachysphinx modesta* (Harris). 6-21-76; 6-18-88
 7894 *Hyles lineata* (Fabricius). 7-13-77; 7-22-78

NOTODONTIDAE

- 7900 *Clostera brucei* (Hy. Edwards). 6-21-76
 7924 *Odontesia elegans* (Strecker). 6-18-88
 7931 *Gluphisia septentrionis* Walker. 6-18-88

- 7940 *Furcula scolopendrina* (Boisduval). 6-21-76; 6-18-88
 8014 *Oligocentria pallida* (Strecker). 6-21-77

ARCTIIDAE

- 8043 *Eilema bicolor* (Grote). 7-30-76
 8050 *Crambidia impura* Barnes & McDunnough. 9-10-77
 8083 *Lycomorpha grotei* (Packard). 8-6-83 (R. Hodgson)
 8089 *Hypoprepia miniata* (Kirby). 7-13-77
 8125 *Holomelina fragilis* (Strecker). 7-16-77
 8126 *Leptartia californiae* (Walker). 5-11-77
 8144 *Turuptiana permaculata* (Packard). 7-14-76; 7-30-76; 7-28-83 (E.W. Elder); 6-18-88
 8180 *Grammia geneura* (Strecker). 6-21-76
 8218 *Aemilia ambigua* (Strecker). 6-21-76; 6-18-88
 8261 *Ctenucha cressonana* Grote. 8-1-83 (E.W. Elder)

NOCTUIDAE

- 8622 *Synedoida inepta* Hy. Edwards. 6-21-76; 6-18-88
 8819 *Catocala pura* Hulst. 9-24-76
 8907 *Autographa biloba* (Stephens). 6-21-77
 8924 *Anagrapha falcifera* (Kirby). 6-20-77; 6-18-88
 9111 *Theresea augustipennis* (Grote). 8-23-77
 9193 *Raphia frater* Grote. 6-21-76; 6-18-88
 9195 *R. coloradensis* Putnam-Cramer. 6-18-88
 9205a *Acronicta lepusculina* Guenée, ssp. *felina* (Grote). 6-21-76; 6-18-88
 9348 *Apamea amputatrix* (Fitch). 7-30-76
 9356 *A. spaldingi* (Smith). 6-18-88
 9358 *A. parcata* (Smith). 6-21-76
 9364a *A. finitima* Guenée, ssp. *cerivana* (Smith). 6-21-77
 9365 *Agroperina lateritia* (Hufnagel). 7-14-76
 9370 *A. conradi* (Grote). 7-30-76; 8-20-76
 9374 *Protagrotis niveivenosa* (Grote). 8-20-76
 9382 *Crymodes devastator* (Brace). 7-30-76; 8-20-76
 9383 *C. longula* (Grote). 9-6-77
 9459 *Amphipoea senilis* (Smith). 9-24-76
 9511 *Hydroecia medialis* Smith. 9-5-77
 9537 *Aseptis dilara* (Strecker). 6-18-88
 9601 *Pseudanarta flavidens* (Grote). 7-30-76
 9609 *P. exasperata* Franclemont. 9-6-77
 9610 *P. perplexa* Franclemont. 9-3-77
 9617 *Pseudanthoecia tumida* (Grote). 8-19-76
 9656 *Platyperigea extima* (Walker). 7-20-76; 9-17-76; 6-18-88
 9681 *Elaphria festivooides* (Guenée). 6-18-88
 9813 *Achytonix epipaschia* (Grote). 8-23-77
 9883 *Homoglaea carbonaria* (Harvey). 9-24-76
 10001 *Lomilysis discolor* (Smith). 8-20-76
 10085 *Oncocnemis terminalis* Smith. 9-10-77
 10093 *O. levis* Grote. 8-20-76

- 10190a *Cucullia speyeri* Lintner, ssp. *dorsalis* Smith. 8-20-76
 10194a *C. intermedia* Speyer, ssp. *cinderella* Smith. 6-21-76; 7-14-76
 10206 *Copicucullia antipoda* (Strecker). 6-21-76
 10224 *Discestra mutata* (Dod). 6-21-77
 10280 *Polia purpurissata* (Grote). 7-16-77
 10290 *P. obscura* (Smith). 6-21-77; 6-18-88
 10307 *Lacinipolia lilacina* (Harvey). 7-30-76
 10313 *Papestra brenda* (Barnes & McDunnough). 6-18-88
 10325 *Miselia glaciata* (Grote). 6-20-77; 6-18-88
 10326 *M. variolata* (Smith). 6-21-76
 10372a *Lacinipolia anguina* (Grote), ssp. *larissa* (Smith). 6-21-76
 10373 *L. incurva* (Smith). 6-21-76; 7-14-76; 6-18-88.
 10379 *L. umbrosa* (Smith). 7-30-76
 10381 *L. naevia* (Smith). 6-21-76; 7-14-76
 10394 *L. vicina* (Grote). 7-14-76; 8-20-76
 10401 *L. lepidula* (Smith). 6-21-76; 6-18-88
 10406b *L. olivacea* (Morrison), ssp. *megarena* (Smith). 7-14-76
 10416 *L. illaudabilis* (Grote). 6-18-88
 10431c *Faronta diffusa* (Walker), ssp. *neptis* (Smith). 6-21-76; 6-18-88
 10436 *Aletia oxygala* (Grote). 7-30-76; 8-20-76
 10438 *Pseudaletia unipuncta* (Haworth). 9-23-76; 9-24-76
 10446 *Leucania multilinea* Walker. 7-14-76; 7-30-76
 10449b *L. insueta* Guenée, ssp. *megadia* Smith. 6-21-76; 6-18-88
 10523.1 *Tholera* undescribed sp. 8-23-76
 10524a *Nephelodes minians* Guenée, ssp. *tertialis* Smith. 7-30-76; 8-20-76
 10528 *N. carminata* (Smith). 8-23-77
 10541 *Homothordes reliqua* (Smith). 7-30-76
 10610 *Neleucania patricia* (Guenée). 7-14-76
 10616 *Trichorthosia parallela* (Grote). 7-30-76
 10617 *T. tristis* (Barnes & McDunnough). 7-14-76
 10651a *Agrotis venerabilis* Walker, ssp. *arida* (Cockerell). 9-3-77; 9-5-77
 10659 *A. volubilis* Harvey. 6-21-76; 7-14-76; 6-18-88
 10670 *Feltia jaculifera* (Guenée). 8-20-76
 10671 *F. hudsoni* Smith. 8-20-76
 10702 *Euxoa divergens* (Walker). 6-21-76; 7-14-76; 7-30-76
 10731 *E. auxiliaris* (Grote). 6-21-76; 7-14-76
 10755 *E. declarata* (Walker). 8-20-76
 10758 *E. flavidens* (Smith). 8-20-76
 10764 *E. stigmatalis* (Smith). 8-23-77
 10780 *E. comosa* (Morrison) (questionably this species). 9-5-77
 10805 *E. tessellata* (Harris). 7-13-77
 10824 *E. brevipennis* (Smith). 9-24-76
 10826 *E. idahoensis* (Grote). 7-30-76
 10830 *E. quadridentata* (Grote & Robinson). 9-8-76
 10833 *E. olivalis* (Grote). 7-30-76
 10849 *E. dodi* McDunnough. 8-23-77

- 10850 *E. infracta* (Morrison). 8-20-76
- 10853 *E. arizonensis* Lafontaine. 8-20-76
- 10854 *E. servita* (Smith). 7-30-76
- 10858 *E. cooki* McDunnough. 8-20-76
- 10860 *Euxoa* sp., near *perolivalis* (Smith). 6-21-77
- 10861 *E. ridingsiana* (Grote). 8-20-76; 9-17-76
- 10882 *Richia parentalis* (Grote). 8-20-76
- 10915 *Peridroma saucia* (Hübner). 6-21-77
- 10977 *Setagrotis atrifrons* (Grote). 9-3-77
- 10992 *Paradiarsia littoralis* (Packard). 6-21-76
- 11041 *Abagrotis placida* (Grote). 8-24-77
- 11062 *Eutricopis nexilis* Morrison. 6-1-77
- 11068 *Heliothis zea* (Boddie). 9-3-77
- 11072 *H. phloxiphagus* Grote & Robinson. 8-25-77
- 11103 *Schinia persimilis* (Grote). 7-14-76

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